Requête SQL utiles

Correspondance entre code INSEE présent dans additional_data et cor_area_synthese

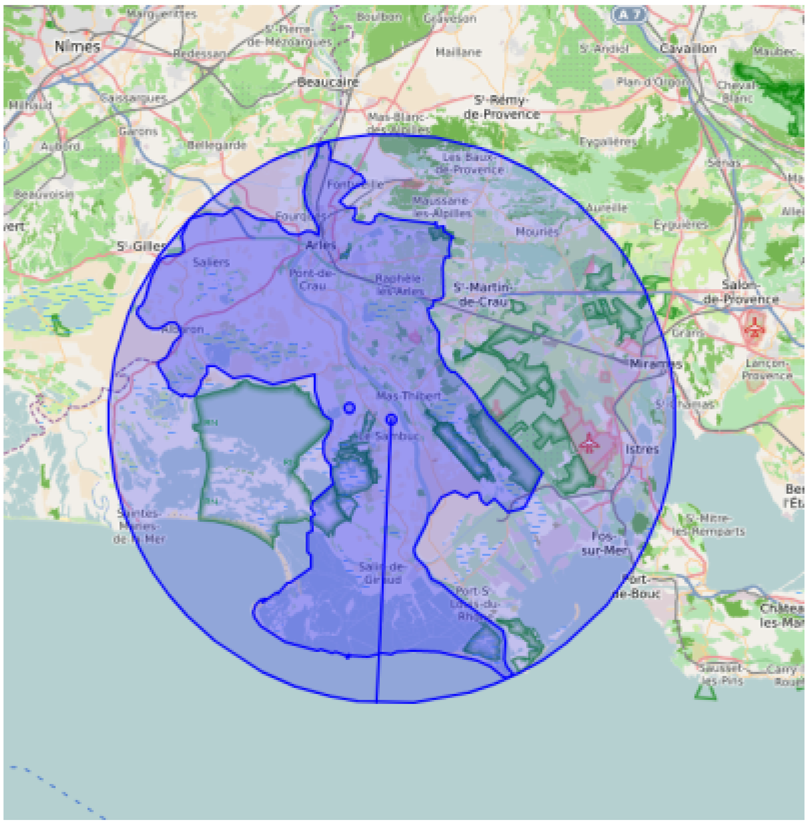
Trouver les codes INSEE fournis dans le champ `additional_data` attribut `communeInseeCode`, existant dans la table `ref_geo.l_areas` mais qui ne correspondent pas à ceux présent dans la table `gn_synthese.cor_area_synthee` :

```
WITH communes AS (
    SELECT la.id_area, la.area_code AS insee_code, la.area_name
    FROM ref_geo.l_areas AS la
    WHERE la.id_type = ref_geo.get_id_area_type_by_code('COM')
        AND la."enable" = TRUE
)
SELECT s.unique_id_sinp, s.the_geom_4326,
s.additional_data::json->>'communeInseeCode' AS code_insee_json, c.area_name
AS area_name_cas, c.insee_code AS code_insee_cas
FROM gn_synthese.synthese AS s
    LEFT JOIN gn_synthese.cor_area_synthese AS cas
        ON (s.id_synthese = cas.id_synthese)
    JOIN communes AS c
        ON (cas.id_area = c.id_area)
WHERE s."precision" IS NULL
    AND s.additional_data::json->>'communeInseeCode' != c.insee_code ;
```

Trouver les codes INSEE fournis dans le champ `additional_data` attribut `communeInseeCode` qui ne correspondent pas à ceux présent dans la table `gn_synthese.cor_area_synthee` car ils n'existent pas dans la table `ref_geo.l_areas` :

```
WITH communes AS (
    SELECT la.id_area, la.area_code AS insee_code, la.area_name
    FROM ref_geo.l_areas AS la
    WHERE la.id_type = ref_geo.get_id_area_type_by_code('COM')
        AND la."enable" = TRUE
)
SELECT DISTINCT s.additional_data::json->>'communeInseeCode' AS
code_insee_json
FROM gn_synthese.synthese AS s
    LEFT JOIN gn_synthese.cor_area_synthese AS cas
        ON (s.id_synthese = cas.id_synthese)
    JOIN communes AS c
        ON (cas.id_area = c.id_area)
WHERE s."precision" IS NULL
    AND s.additional_data::json->>'communeInseeCode' != c.insee_code
    AND s.additional_data::json->>'communeInseeCode' NOT IN (SELECT
insee_code FROM communes);
```

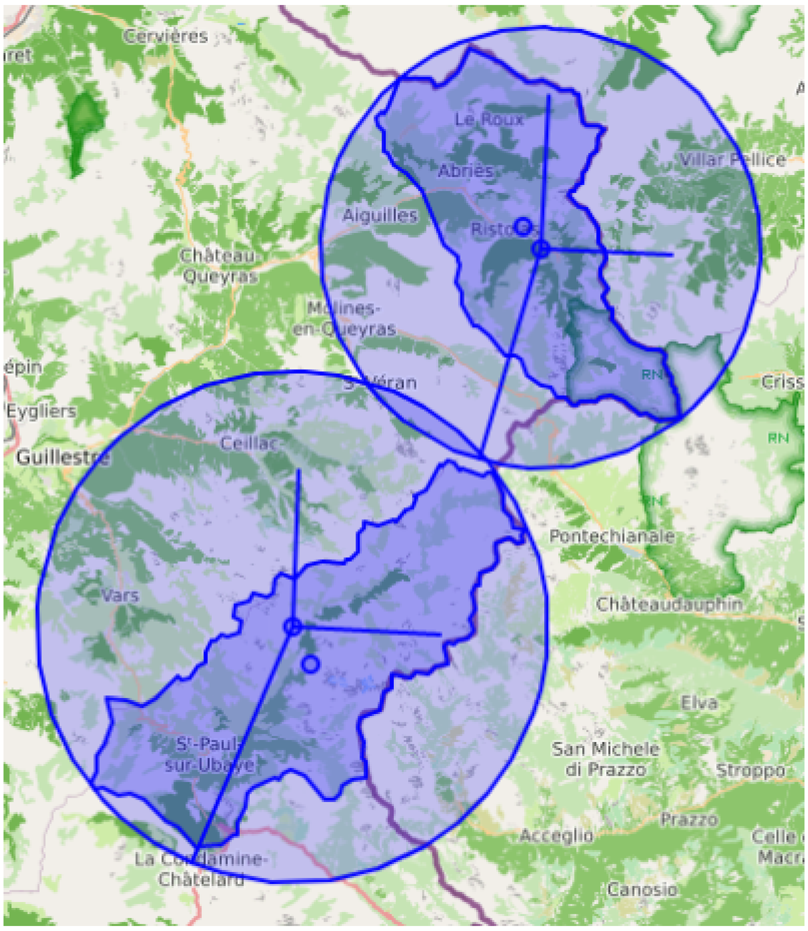
Calculer le rayon du cercle comprenant un polygon (communes)



```
SELECT
    unique_id_sinp,
    round(radius(ST_MinimumBoundingRadius(la.geom))) AS "precision",
    center(ST_MinimumBoundingRadius(la.geom)) AS rayon,
    ST_MinimumBoundingCircle(la.geom) AS cercle,
    ST_LongestLine(center(ST_MinimumBoundingRadius(la.geom)),
ST_MinimumBoundingCircle(la.geom)) AS rayon,
    st_centroid(la.geom) AS centroid,
    la.geom,
    la.area_name
FROM gn_synthese.synthese AS s
    LEFT JOIN gn_synthese.cor_area_synthese AS cas
        ON (s.id_synthese = cas.id_synthese)
    JOIN ref_geo.l_areas AS la
        ON (cas.id_area = la.id_area)
WHERE s.id_source != gn_synthese.get_id_source_by_name('SI CBN')
    AND s."precision" IS NULL
    AND la.id_type = ref_geo.get_id_area_type_by_code('COM')
LIMIT 100;
```

Différents calcul du rayon moyen d'un polygone

Il est possible d'utiliser :



1. la fonction `ST_MinimumBoundingRadius()` de Postgis :

   ```
   round(radius(ST_MinimumBoundingRadius(geom)))
   ```

2. la distance moyenne du centroïde du polygone a chaque point constituant son périmètre :

   ```
   round(AVG(ST_Distance(st_centroid(la.geom), perimeters.geom)))
   ```

3. le calcul du rayon d'un cercle à partir de son aire :

   ```
   round(|/(st_area(geom)/pi()))::INT
   ```

La première méthode retourne un rayon plus grand que la seconde méthode, la plus petite valeur obetnue étant avec le calcul du rayon d'un cercle…

```
SELECT
    la.area_name,
    la.area_code,
    round(AVG(ST_Distance(st_centroid(la.geom), perimeters.geom))) AS
"precision_avgdistance",
    round(|/(st_area(la.geom)/pi()))::INT AS "precision_calculaire",
    round(radius(ST_MinimumBoundingRadius(la.geom))) AS
"precision_minboundingradius",
    la.geom,
    st_centroid(la.geom) AS centroid,
    center(ST_MinimumBoundingRadius(la.geom)) AS centre,
```

```
    ST_MinimumBoundingCircle(la.geom) AS cercle,
    ST_LongestLine(center(ST_MinimumBoundingRadius(la.geom)),
ST_MinimumBoundingCircle(la.geom)) AS rayon_minboundingradius,
    ST_MakeLine(
    center(ST_MinimumBoundingRadius(la.geom)),
        ST_SetSRID(
            ST_MakePoint(
                ST_X(center(ST_MinimumBoundingRadius(la.geom))) +
round(|/(st_area(la.geom)/pi()))::INT,
                ST_Y(center(ST_MinimumBoundingRadius(la.geom)))
            ),
            2154
        )
    ) AS rayon_calculaire,
    ST_MakeLine(
        center(ST_MinimumBoundingRadius(la.geom)),
        ST_SetSRID(
            ST_MakePoint(
                ST_X(center(ST_MinimumBoundingRadius(la.geom))),
                ST_Y(center(ST_MinimumBoundingRadius(la.geom))) +
round(AVG(ST_Distance(st_centroid(la.geom), perimeters.geom)))
            ),
            2154
        )
    ) AS rayon_avgdistance
FROM ref_geo.l_areas AS la JOIN (
    SELECT id_area, (ST_DumpPoints(geom)).*
    FROM ref_geo.l_areas
    WHERE id_type = ref_geo.get_id_area_type('COM')
) AS perimeters
    ON (la.id_area = perimeters.id_area)
WHERE la.id_type = ref_geo.get_id_area_type('COM')
GROUP BY la.id_area, la.geom, la.area_name, la.area_code
ORDER BY la.id_area
LIMIT 10 ;
```

Déterminer s'il manque des index

Source: https://salayhin.wordpress.com/2018/01/02/finding-missing-index-in-postgresql/

```
SELECT
    schemaname,
    relname,
    seq_scan - idx_scan AS too_much_seq,
    CASE
        WHEN seq_scan - COALESCE(idx_scan, 0) > 0 THEN 'Missing Index ?'
        ELSE 'OK'
    END,
    pg_relation_size(CONCAT(schemaname, '.', relname)::regclass) AS
```

```
rel_size,
    seq_scan, idx_scan
FROM pg_stat_all_tables
WHERE pg_relation_size(CONCAT(schemaname, '.', relname)::regclass) > 80000
ORDER BY too_much_seq DESC;
```

```
SELECT
  x1.table_in_trouble,
  pg_relation_size(x1.table_in_trouble) AS sz_n_byts,
  x1.seq_scan,
  x1.idx_scan,
  CASE
    WHEN pg_relation_size(x1.table_in_trouble) > 500000000
        THEN 'Exceeds 500 megs, too large to count in a view. For a count,
count individually'::text
    ELSE COUNT(x1.table_in_trouble)::text
  END AS tbl_rec_count,
  x1.priority
FROM
  (
    SELECT
      (schemaname::text || '.'::text) || relname::text AS table_in_trouble,
      seq_scan,
      idx_scan,
      CASE
          WHEN (seq_scan - idx_scan) < 500
            THEN 'Minor Problem'::text
          WHEN (seq_scan - idx_scan) >= 500 AND (seq_scan - idx_scan) < 2500
            THEN 'Major Problem'::text
          WHEN (seq_scan - idx_scan) >= 2500
            THEN 'Extreme Problem'::text
          ELSE NULL::text
      END AS priority
    FROM
      pg_stat_all_tables
    WHERE
      seq_scan > idx_scan
      AND schemaname != 'pg_catalog'::name
    AND seq_scan > 100) x1
GROUP BY
  x1.table_in_trouble,
  x1.seq_scan,
  x1.idx_scan,
  x1.priority
ORDER BY
  x1.priority DESC,
  x1.seq_scan;
```